

WHAT IS CLAIMED IS:

1. A system for providing video services, comprising:
a home transport, comprising:
a full EIT data stream transmitted at a high spool rate; and
one or more services;
one or more non-home transports, each comprising:
a partial EIT data stream transmitted at a high spool rate;
a low spool rate EIT data stream transmitted at a low spool rate
containing at least the data carried in said full EIT data stream less the data
carried by said partial EIT data stream; and
one or more additional services.
2. The system recited in claim 1, wherein said low spool rate EIT data stream in
said one or more non-home transports carries only EIT data that is not already
carried in said partial EIT data stream in said one or more non-home transports.
3. The system recited in claim 1, wherein said low spool rate EIT data stream in
said one or more non-home transports is a full EIT data stream.
4. The system recited in claim 1, wherein said full EIT data stream is
transmitted using interlacing by time rather than interlacing by service.
5. The system recited in claim 1, wherein all of said EIT data streams are
reordered to be transmitted using interlacing by time rather than interlacing by
service.

6. A data architecture for storing EIT data in a memory of a set top box, comprising:

a segment data structure into which a segment of EIT data containing information related to one or more events is stored and an event instance table pointer;

an event instance table pointed to by said event instance table pointer corresponding to said segment data structure, comprising:

one or more event instance data structures each corresponding to one of said one or more events and each containing an event data structure pointer; and;

one or more event data structures containing common information for like events, wherein each particular event data structure is pointed to by said event data structure pointer stored in those of said one or more event instance data structures that correspond to said like events.

7. The data architecture recited in claim 6, further comprising an event-related data table, comprising:

event-related data associated with said like events; and

a pointer to said event detailed data structure associated with said like events.

8. The data architecture recited in claim 6, wherein said segment data structure has a length of 10 bytes or less.

9. The data architecture recited in claim 6, wherein said event instance data structure has a length of 12 bytes or less.

10. The data architecture recited in claim 6, wherein said event data structure has a fixed portion having a length of 12 bytes or less and a variable portion having an average length of approximately 70 bytes.

11. A method for storing EIT data in a set top box, comprising the steps of:

- (a) receiving a segment of EIT data;
- (b) storing said segment;
- (c) creating an event instance data structure associated with a particular event in said segment;
- (d) extracting event-related data pertaining to said particular event;
- (e) comparing the extracted event-related data to event-related data previously stored in an event-related data table;
- (f) obtaining an event data structure pointer to detailed data associated with said particular event from said event-related data table if a match occurs in step (e);
- (g) storing said event data structure pointer in said event instance data structure; and
- (h) storing said event instance data structure in an event instance table.

12. The method recited in claim 11, wherein step (b) comprises the steps of:

- (i) creating a segment data table;
- (ii) storing said segment in said segment data table; and

- (iii) storing an event instance data pointer pointing to said event instance data table in association with said segment.

13. The method of claim 11, further comprising the steps of:

- (i) creating an event data structure in which detailed data associated with said particular event is stored when there is no match in comparing step (e);
- (j) creating an event data pointer to said event data structure created in step (i); and
- (k) storing said extracted event-related data and said event data pointer created in step (j) in said event-related data table.

14. The method recited in claim 13, further comprising the step of hashing said event-related data prior to comparing step (e).

15. The method recited in claim 11, further comprising the steps of:

- (i) determining if said extracted event-related data corresponds to the first event in the EIT data; and
- (j) creating an event data structure in which detailed data associated with said particular event is stored if step (i) indicates the event-related data corresponds to the first event;
- (k) creating an event data pointer to said event data structure created in step (j); and
- (l) storing said extracted event-related data and said event data pointer created in step (k) in said event-related data table.

16. The method recited in claim 11, further comprising the steps of:
- (i) determining if all events in said segment have been processed;
 - (j) repeating steps (c)-(h) until all events in said segment have been processed.
17. The method recited in claim 11, further comprising the steps of:
- (i) determining if all segments in said EIT data have been processed;
 - (j) repeating steps (a)-(h) until all segments in said EIT data have been processed.
18. A system for transmitting video services to reduce interruption to a subscriber comprising:
- a set top box for receiving full EIT data from a data source;
 - means for reordering the full EIT data according to time;
 - means for updating the data stored in the set top box at a time when the set top box is normally idle;
 - means for locking the current time segment of data when the subscriber attempts to access the data while it is being updated.
19. The system recited in claim 18, wherein the full EIT data is sent in a home transport and in each of one or more non-home transports, and wherein only the EIT data sent in the non-home transports is reordered according to time.
20. A method for transmitting video services to reduce interruption to a subscriber comprising the steps of:
- (a) receiving full EIT data from a data source;

- (b) reordering the full EIT data according to time;
- (c) updating the data stored in the set top box at a time when the set top box is normally idle; and
- (d) locking the current time segment of data when the subscriber attempts to access the data while it is being updated.

21. The system recited in claim 20, wherein the full EIT data is sent in a home transport and in each of one or more non-home transports, and wherein reordering step (b) comprises the step of reordering only the EIT data sent in the non-home transports is reordered according to time.

22. A set top box comprising:

a receiver to receive EIT data and format said EIT data into formatted EIT data;

a processor to process said formatted EIT data; and

a memory having a data architecture in which the processed EIT data is stored so as to significantly reduce the inherent redundancy of the EIT data.

23. The set top box of claim 22 wherein said processor determines which data is common to like events in said EIT data and stores that common data in a single data structure accessible by each of said like events.

25. The set top box of claim 22, wherein said processor reorders the formatted EIT data by time.

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